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09/742,443	12/22/2000	Fredrik Johansson	00254.00011	8925

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EXAMINER

MILLS, DONALD L

ART UNIT PAPER NUMBER

2616

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/742,443	JOHANSSON ET AL.	
	Examiner	Art Unit	
	Donald L. Mills	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 65-102 is/are pending in the application.
- 4a) Of the above claim(s) 103-129 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 65-102 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) ~~65-129~~ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 65-102 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 65, the claim specifies forwarding datagrams without any “awareness of the Mobile IP protocol” (See claim 65, lines 6.) It is unclear how a datagram can be forwarded from a node to a destination mobile IP node without being aware of the destination address, which is part of the Mobile IP protocol. The assertion that a node can forward a datagram without any awareness of the destination’s protocol seems to be a complete contradiction since some destination address corresponding to that protocol must be known in order for the datagram to ever reach its destination. Moreover, by reciting the limitation as “unaware of the mobile IP protocol” the “correspondent node” would be incapable of completing the forwarding process since it would be unable to successfully determine the proper course of action with the unknown protocol of mobile IP. For the purpose of this Examination, the Examiner will interpret “without” as “with.”

Claim Rejections - 35 USC § 102

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 65-67, 71, 74-92, and 94-102 are rejected under 35 U.S.C. 102(e) as being anticipated by Comstock (US 6,452,920 B1).

Regarding claim 65, Comstock discloses a mobile terminating L2TP using mobile IP data, which comprises:

Forwarding a datagram from a correspondent node to a mobile node using a shortest path between the mobile node and the correspondent node, wherein the mobile node is in a mobile IP visiting network having a mobile IP protocol, and wherein the correspondent node is unaware of the mobile IP protocol (Referring to Figure 2, see column 5, lines 66-67 and column 6, lines 1-6.)

Regarding claim 66, Comstock discloses *registering the mobile node with the mobile IP visiting network; and adding a route entry to a routing table in a mobile IP foreign agent* (Referring to Figure 2, see column 5, lines 66-67 and column 6, lines 1-6.)

Regarding claim 67, Comstock discloses *removing the route entry from the routing table when the registered mobile node de-registers or times out* (See column 2, lines 16-26.)

Regarding claim 71, Comstock discloses *a source address comprising an address of the mobile node; a destination address comprising a set of subnetworks in a vicinity of the mobile a nexthop value comprising a local interface of the mobile IP foreign agent. IP foreign agent; and*

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a nexthop value comprising a local interface of the mobile IP foreign agent (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 74, Comstock discloses *performing dynamic Network Address Translation (NAT) for a second datagram sent from the mobile node to a second correspondent node, wherein the second correspondent node is part of the mobile IP visiting network (See column 1, lines 45-62 and column 3, lines 40-45.)*

Regarding claim 75, Comstock discloses *indexing a state in a state table using a mobile node home network address and a link layer address (See column 1, lines 45-62 and column 3, lines 40-45.)*

Regarding claim 76, Comstock discloses *accepting the state from the state table when the mobile node has a valid registration (See column 1, lines 45-62 and column 3, lines 40-45.)*

Regarding claim 77, Comstock discloses *denying the state from the state table when the mobile node does not have a valid registration (See column 1, lines 45-62 and column 3, lines 40-45.)*

Regarding claim 78, Comstock discloses *wherein indexing the state in the state table comprises indexing by the link layer type which the mobile node attaches to the mobile IP foreign agent (See column 1, lines 45-62 and column 3, lines 40-45.)*

Regarding claim 79, Comstock discloses *distributing static routes and filters for the mobile node to the mobile IP foreign agent (See column 1, lines 45-62 and column 3, lines 40-45.)*

Regarding claim 80, Comstock discloses *wherein distributing static routes and filters occurs at a time of configuration (See column 1, lines 45-62 and column 3, lines 40-45.)*

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Regarding claim 81, Comstock discloses *wherein distributing static routes and filters occurs at a time of registering the mobile node* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 82, Comstock discloses *wherein distributing static routes and filters occurs as part of a DIAMETER response from a home agent to the foreign agent* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 83, Comstock discloses *tying the filters to a mobile node home network address and a home agent address* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 84, Comstock discloses *applying the filters to traffic sent from the mobile node on a local subnet when the mobile node has a valid registration* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 85, Comstock discloses *blocking the filters when the mobile node does not have a valid registration* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 86, Comstock discloses *allocating a care-of address to the mobile node using a dynamic host configuration procedure* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 87, Comstock discloses *applying the care-of address as a source address to a virtual interface adapter in the mobile node; and using the virtual interface adapter for traffic to destinations within the mobile IP visiting network* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 88, Comstock discloses *enabling the virtual interface adapter at a time of registering the mobile node* (See column 1, lines 45-62 and column 3, lines 40-45.)

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Regarding claim 89, Comstock discloses *disabling the virtual interface adapter at one of a time when a registration of the mobile node is no longer valid, and a time when the mobile node moves to a new mobile IP visiting network* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 90, Comstock discloses *giving a home agent tunnel a lower routing cost as nexthop compared to local IP connectivity for the static routes* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 91, Comstock discloses *wherein registering the mobile node with the mobile IP visiting network involves a dynamic host configuration procedure in a home network* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 92, Comstock discloses *wherein distributing the static routes comprises including the static routes as an extension in a mobile IP registration reply message as part of the dynamic host configuration procedure* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 94, Comstock discloses *applying filter rules at the mobile node for traffic being sent and received with local IP connectivity and a home agent tunnel respectively* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 95, Comstock discloses *wherein the filter rules are distributed to the mobile node at a time of configuration* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 96, Comstock discloses *wherein the filter rules are distributed to the mobile node at a time of registering the mobile node* (See column 1, lines 45-62 and column 3, lines 40-45.)

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Regarding claim 97, Comstock discloses *wherein the filter rules are distributed as an extension in a mobile IP registration reply message* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 98, Comstock discloses *applying a selective reverse tunneling scheme between a home agent tunnel and local IP connectivity using a routing prefix and a routing cost* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 99, Comstock discloses *giving a lower routing cost to a home agent tunnel route as nexthop compared to local IP connectivity when private address realms for the visiting network and the home network overlap* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 100, Comstock discloses *giving a lower routing cost to a home agent tunnel route as nexthop compared to local IP connectivity for a route to the Internet* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 101, Comstock discloses *giving a lower routing cost to local IP connectivity as nexthop compared to a home agent tunnel route for a route to a same subnetwork as the mobile node* (See column 1, lines 45-62 and column 3, lines 40-45.)

Regarding claim 102, Comstock discloses *giving a lower routing cost to a home agent tunnel route as nexthop compared to local IP connectivity for a route to a home network* (See column 1, lines 45-62 and column 3, lines 40-45.)

Election/Restrictions

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5. Newly submitted claims 103, 112, 113, and 118 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 103, 112, 113, and 118 are directed towards extending a Mobile IP network.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 103-129 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Allowable Subject Matter

6. Claims 68-70, 72, 73, and 93 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 24 April 2006 have been fully considered but they are not persuasive.

Rejection Under 35 USC § 112

On page 12 of the remarks, regarding claim 65, the Applicant argues forwarding datagrams without any “awareness of the Mobile IP protocol” is supported in the original written description and drawings. However, the Examiner is not rejecting the claims based upon a lack of written description or enablement. The Examiner is rejecting the claims as being indefinite since the intended meaning of “awareness of Mobile IP protocol” is unclear from the context of

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the claim. Contrary to the claim limitation, the “corresponding node” is in fact “aware” of the mobile IP protocol, otherwise forwarding the datagram would be impossible. In fact, on page 14 lines 5-7 of the remarks, the Applicant acknowledges the “correspondent node is aware of the mobile node IP address... and is not aware of anything related to mobile IP tunneling...” There is a great distinction between the lack of awareness of the entire mobile IP protocol, as claimed, and the intended mobile IP tunneling function as directed to on page 14. The Examiner politely reminds the Applicant that limitations from the specification are not read into the claims. One could overcome the indefiniteness of the limitation in question by amending the claim to recite the distinction between the entire mobile IP protocol and mobile IP tunneling as noted above.

Rejection Under 35 USC 102

On page 15 of the remarks, regarding claim 65, the Applicant argues Comstock does not disclose *wherein the correspondent node is unaware of the mobile IP protocol*. The Examiner respectfully disagrees based upon the interpretation of the claim limitation as discussed above.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Donald L Mills

DLM

July 5, 2006

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